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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/647,917	08/26/2003	Philip Francis Miele	7170	2439

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10100 West Ute Avenue
Littleton, CO 80127

EXAMINER

DICUS, TAMRA

ART UNIT	PAPER NUMBER
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1774

MAIL DATE	DELIVERY MODE
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06/04/2007

PAPER

Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

Office Action Summary	Application No. 10/647,917	Applicant(s) MIELE, PHILIP FRANCIS	
	Examiner Tamra L. Dicus	Art Unit 1774	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 25 April 2007.
- 2a) ☒ This action is **FINAL**. 2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-13 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-13 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
 2. ☐ Certified copies of the priority documents have been received in Application No. _____.
 3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|--|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413)
Paper No(s)/Mail Date. _____ |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | 5) <input type="checkbox"/> Notice of Informal Patent Application |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO/SB/08)
Paper No(s)/Mail Date _____ | 6) <input type="checkbox"/> Other: _____ |

DETAILED ACTION

The rejections are withdrawn due to Applicant's amendments.

Claim Objections

Claim 1 is objected to because of the following informalities: semi colons are used throughout when commas should be used. Appropriate correction is required. Additionally, the language is not an acceptable Markush group listing. One acceptable form of alternative expression, which is commonly referred to as a Markush group, recites members as being "selected from the group consisting of A, B and C." See *Ex parte Markush*, 1925 C.D. 126 (Comm'r Pat. 1925). Suitable language to include would be {"wherein the X are selected from the group consisting of". Appropriate correction is required. See applicant's use of "and", "or".

Claim Rejections - 35 USC § 112

The following is a quotation of the first paragraph of 35 U.S.C. 112:

The specification shall contain a written description of the invention, and of the manner and process of making and using it, in such full, clear, concise, and exact terms as to enable any person skilled in the art to which it pertains, or with which it is most nearly connected, to make and use the same and shall set forth the best mode contemplated by the inventor of carrying out his invention.

Claims 1-13 are rejected under 35 U.S.C. 112, first paragraph, as failing to comply with the written description requirement. The claim(s) contains subject matter which was not described in the specification in such a way as to reasonably convey to one skilled in the relevant art that the inventor(s), at the time the application was filed, had possession of the claimed invention. The Examiner believes that independent claim 1 does not have the proper support in the original specification as filed because the specification does not provide any teaching or

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discussion on fibers consisting essentially of polymer fibers or its usage with Applicant's claimed nonwoven fibrous mat. See the instant Examples, no wt. percentages of polymer fibers are mentioned, nor any language implying a high percentage of polymer fibers are employed, nor any discussion of non-polymeric fibers and their respective amounts.

The following is a quotation of the second paragraph of 35 U.S.C. 112:

The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

Claims 1-13 are rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.

Claim 1 recites "the fibers in the fibrous mat" which lacks antecedent basis.

Claim 1 recites, "polymer fibers bound by 16-30 wt. percent, based on the mat "of a" formaldehyde containing polymer resin latex binder selected from a group consisting of a latex polymer "composed of"; further reciting "formaldehyde containing resin in the binder", which is jumbled and ambiguous language. It is not clear what the exact composition is written in this fashion. Further to the formaldehyde containing resin in the binder, it is not clear if the reference is to the polymer resin latex binder (line 4) or the latex polymer (line 5), or both. Claim 2 has similar issues. In addition, the claims are indefinite due to improper Markush language and punctuation, which results in uncertainty and/or ambiguity with respect to the scope and clarity of the claims. First, it is not clear what components of the Markush group are relied upon for the polymer resin latex binder. Secondly, it is not clear what components for the Markush group are intended for the latex polymer(s). See MPEP 2173.05(h).

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For the record, the Examiner has interpreted the claims broadly for prior art purposes.

Claim Rejections - 35 USC § 103

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

Claims 1-13 are rejected under 35 U.S.C. 103(a) as being unpatentable over Chang et al (US 5914365) in view of Taylor et al (US 5578371).

Chang teaches the basic claimed invention including polymer fiber material in the form of a mat (comprised of polymer fibers such as acrylic, polyamide, or polyester ones, in 50 to 97% in the mat, col. 6, lines 55-68, meeting consisting essentially of language per instant claim 1 and polyester per claims 11-13) said polymer fibers being bonded by a specific weight amount of a formaldehyde latex binder (col. 6, lines 10-15 and lines 45-50) per instant claim 1. To claims 2 and 8-10, similar compositions having similar properties such as acrylic copolymers and SBR (embraces acrylonitrile, a rubber of SBR) and SMA are employed within the binder (Table 2, Examples 2-3, col. 2, lines 20-45, col.7, lines 40-45).

Chang does not teach including a bisulfite compound of specific amounts per instant claim 1 or claims 3-10, ammonium bisulfite of similar composition- col.. 4, lines 27-65, Table 1, per claims 4-8, 11-13.

Taylor teaches urea or phenol formaldehyde binder compositions for fibrous mats, said composition including a bisulfite, such as ammonium sulfite, to lower formaldehyde emissions. (Abstract, col. 3, lines 24-35, line 60- col. 4, line 19; col. 4, lines 27-68; col. 6, lines 23-30). See

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also concerning claims 3-10, ammonium bisulfite of similar composition- col. 4, lines 27-65; see Table 1 -claims 4-8, 11.

It would have been obvious to one having ordinary skill in the art to have modified the binder composition of Chang to include bisulfite as claimed because Taylor teaches the incorporation reduces total emissions as cited above.

Per instant claims 1 and 11-13, the basis weight recitations, it is submitted the optimal and/or claimed values of the respective material would have been obvious to the skilled artisan at the time the invention is made since it has long being held that such discovery, such as an optimum value of the respective result effective variable involves only routine skill in the art. In *re boesch*, 617 F.2d 272,205 USPQ 215(CCPA 1980).

Claim 2 is rejected under 35 U.S.C. 103(a) as being unpatentable over Chang et al (US 5914365) in view of Taylor et al (US 5578371), and further in view of Hummerich et al (US 6071994).

The combination is relied upon above.

While Chang teaches acrylic SMA and SBR copolymers, Hummerich is also provided for acrylic and the other variables in the list of instant claim 2.

Hummerich et al teaches that it is known in the art to utilize acrylic copolymer material and styrene in binder composition- col. 2, line 52; col. 3, lines 1-22 and lines 50-60; col. 5, lines 14-21; col. 6, lines 15- 20; col. 9, lines 30-44; col. 10, lines 20-45. It is noted the reference teaches its binder mixed with formaldehyde- col. 9, lines 50-68, col. 10, lines 9-13.

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It would have been obvious to one having ordinary skill in the art to have modified the combination to include the resins as claimed because Hummerich teaches they provide short drying times and high strength as cited above.

Claims 8-10 are rejected under 35 U.S.C. 103(a) as being unpatentable over Chang et al (US 5914365) in view of Taylor et al (US 5578371), and further in view of Nishibara et al (US 5178706).

The combination is relied upon above.

While Chang teaches acrylic SMA and SBR copolymers, Nishibara is also provided for acrylonitrile in the list of instant claim 8-10.

Nishibara teaches SBR and acrylonitriles are well known common rubbers for polymer fibers (col. 2, lines 20-65).

It would have been obvious to one having ordinary skill in the art to have recognized the combination resins as claimed (SBR acrylonitrile types) are as Nishibara teaches well known alternatives for polymer polyester fibers (Abstract, col. 2, lines 20-65).

Response to Arguments

Applicant's arguments have been considered but are moot in view of the new ground(s) of rejection.

Concerning the 112 new matter rejection above, when the new matter is removed, the prior rejection will reapply.

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Concerning the 112 2nd paragraph rejection, the Examiner suggests using similar language as found in the Remarks, see second paragraph, lines 1-3, to better define the composition. See also the language in Applicant's instant specification at page 5, lines 26-32.

Taylor is still used to teach the bisulfite compound amounts as set forth above.

The Declaration was considered, however, found not to be commensurate in scope with the claims.

Conclusion

Applicant's amendment necessitated the new ground(s) of rejection presented in this Office action. Accordingly, **THIS ACTION IS MADE FINAL**. See MPEP § 706.07(a). Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

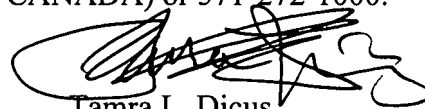
A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the date of this final action.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Tamra L. Dicus whose telephone number is 571-272-1519. The examiner can normally be reached on Monday-Friday, 7:00-4:30 p.m., alternate Fridays.

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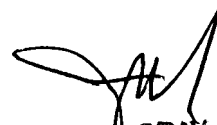
If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Rena Dye can be reached on 571-272-3186. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.



Tamra L. Dicus
Examiner
Art Unit 1774

May 24, 2007



JILL GRAY
PRIMARY EXAMINER